
# *Joint Program Executive Office Joint Tactical Radio System*

# *Software Communications Architecture (SCA) Updates in Version 2.2.2*

**JTRS Standards**
**22 December 2006**

# Specific Changes to the SCA (1 of 3)

- Incorporates clarifications provided in SCA 2.2.1
  - Removes ~40 unnecessary event generation requirements
  - SCA 2.2.1 clarifications were vetted through JPO TAG and provided improvements with respect to requirements ambiguity and clarity.
  - Removes an unattainable condition to throw an exception and provide a return value from the create resource operation when native C++ exceptions are used
- Incorporates clarifications and ambiguities discovered beyond SCA 2.2.1
  - Removes lingering text which may have suggested a requirement to perform on set XML parsing
  - Removes the requirements for the CF “profile” attributes to accommodate both raw XML and file references
- Updates minimumCORBA reference to a current commercially implemented and supported version
  - Provides an evolution path to use server side CORBA Real Time extensions
- Incorporates OMG Lightweight Log specification 1.1 in lieu of SCA defined Log
  - Removes ~40 requirements from the SCA text
- Updates POSIX reference to a current commercially supported and obtainable version
  - SCA 2.2 contains a reference to a non-existent POSIX release. The version that should have been referenced by the specification is no longer available from the IEEE site and is not implemented by commercially available OS products.

# Specific Changes to the SCA (2 of 3)

- Incorporates more complete connection management strategy
  - Clearly defines what constitutes a pending connection and the CF responsibilities for identifying and completing pending connections.
  - The conditions and components that are subject to pending connection have been discussed during the compliance testing process
- Provides correct mechanism to unregister services.
  - The SCA 2.2 unregister service operation led to non-deterministic results as there was no mechanism to specifically identify which service instance was to be removed as part of unregistration
- Provides a clearer definition of file system operations with regard to what operations are applicable to directories versus only files.
  - This issue has arisen as part of compliance evaluations and has resulted in waivers being provided
- Provides a more explicit definition of the division of responsibility for device allocation decisions between the application factory and existing devices
  - This issue has arisen multiple times during SCA compliance evaluations
- Provides a much more straightforward definition of Aggregate Devices and their intended usage within the system
  - The complexity of the Aggregate Device interface dissuaded use of the construct within the framework
- Clarifies expected behavior upon duplicate device, service and device manager registration
  - This issue was raised as a result of JTAP compliance testing

# Specific Changes to the SCA (3 of 3)

- Modifies *uninstallapplication* operation to not require the removal of files
  - This issue has been raised in multiple instances of compliance testing and has resulted in the generation of a waiver
- Provides direction for copy operation behavior when the destination file exists.
  - This issue has been raised in compliance testing and has resulted in the generation of a waiver
- Removes ~3 requirements in the Hardware compliance section
- Removes ~250 Security Supplement requirements from the SCA baseline
- Removes ~40 API Supplement requirements from the SCA baseline
  - Leverages JPEO standard API development processes and interfaces